

APPENDIX C – WILD LUPINE POPULATION NOTES

**NiSource
2004 Baseline Monitoring Report
Wild Lupine and Karner Blue Butterfly Survey**

Aetna Right-of-Way A

Eight populations of wild lupine observed.

Nectar species on site: dogbane, sand cress, butterfly weed, sand coreopsis, tall coreopsis, flowering spurge, western sunflower, rough blazing star, hairy puccoon, white sweet clover, horse mint, blackberry/dewberry/raspberry, black-eyed Susan, showy goldenrod

Invasive species on site: quack grass, Japanese chess, downy brome, Canada thistle, horseweed, tall fescue, Morrow's honeysuckle, Kentucky blue grass, quaking aspen, glossy buckthorn

Population	Wild Lupine Notes
1	Fairly dense, especially at north end. None flowering, some fruiting, some vegetative. Riverbank grape at top of slope shading out lupine. <i>Nectar species:</i> None <i>Invasive species:</i> Morrow's honeysuckle
2	Dense at north and south ends of population, less dense and scattered in middle of population. Some flowering, some fruiting, mostly vegetative. <i>Nectar species:</i> butterfly weed, flowering spurge, hairy puccoon, horse mint, blackberry/dewberry/raspberry <i>Invasive species:</i> Japanese chess, horseweed, Morrow's honeysuckle, Kentucky blue grass, quaking aspen to west
3	One plant. Vegetative. <i>Nectar species:</i> None <i>Invasive species:</i> quack grass, Kentucky blue grass dominant in vicinity
4	Fairly dense at north end, scattered and sparse at south end. None flowering, some fruiting, some vegetative. Lots of riverbank grape crowding out wild lupine. <i>Nectar species:</i> horse mint, blackberry/dewberry/raspberry <i>Invasive species:</i> quack grass, downy brome, Morrow's honeysuckle
5	Dense in center and west, sparse at east end of population. Few flowering, mostly fruiting. <i>Nectar species:</i> blackberry/dewberry/raspberry <i>Invasive species:</i> quack grass
6	Small population, but fairly dense within population. Most have fruited. <i>Nectar species:</i> blackberry/dewberry/raspberry <i>Invasive species:</i> quack grass
7	Dense at north and east ends, scattered throughout the rest of the population. One flowering, most fruiting. <i>Nectar species:</i> sand coreopsis, tall coreopsis, flowering spurge, western sunflower, rough blazing star, hairy puccoon, blackberry/dewberry/raspberry, black-eyed Susan, showy goldenrod <i>Invasive species:</i> Morrow's honeysuckle
8	Scattered throughout population, some large clumps. Mostly fruiting, some have flower buds. <i>Nectar species:</i> sand cress, butterfly weed, flowering spurge, hairy puccoon, horse mint, blackberry/dewberry/raspberry, showy goldenrod <i>Invasive species:</i> downy brome, Morrow's honeysuckle, Kentucky blue grass, glossy buckthorn

Aetna Right-of-Way B

No wild lupine observed. Lupine habitat is present throughout the site, but no lupine is present.

Nectar species on site: dogbane, sand cress, butterfly weed, flowering spurge, hairy puccoon, white sweet clover, horse mint, blackberry/dewberry/raspberry

Invasive species on site: quack grass, Hungarian brome, downy brome, hardy catalpa, orange day lily, Morrow's honeysuckle, white sweet clover, common reed, Canada blue grass, glossy buckthorn, bouncing bet, Siberian elm

Ogden Dunes Right-of-Way

Three populations of wild lupine observed.

Nectar species on site: sand cress, butterfly weed, whorled milkweed, prairie coreopsis, flowering spurge, rough blazing star, hairy puccoon, white sweet clover, horse mint, common cinquefoil, blackberry/dewberry/raspberry, black-eyed Susan, showy goldenrod

Invasive species on site: downy brome, ground ivy, Morrow's honeysuckle, Kentucky blue grass, black locust, multiflora rose, bouncing bet

Population	Wild Lupine Notes
1	Fairly dense throughout most of population. Strip at east end in middle has no lupine, lupine sparse at west end. A few young black oaks within population that could potentially shade out lupine over time. <i>Nectar species:</i> butterfly weed, prairie coreopsis, flowering spurge, hairy puccoon, horse mint, blackberry/dewberry/raspberry, showy goldenrod <i>Invasive species:</i> None
2	Dense throughout majority of population. Sparse at very east end. Some fruiting, some vegetative. <i>Nectar species:</i> butterfly weed, rough blazing star, hairy puccoon, horse mint, showy goldenrod <i>Invasive species:</i> Kentucky blue grass
3	Sparse on portions of slope along south boundary. Scattered and sparse along west end, dense throughout remainder. Most have fruited, some vegetative. <i>Nectar species:</i> sand cress, butterfly weed, prairie coreopsis, flowering spurge, hairy puccoon, white sweet clover, horse mint, common cinquefoil, black-eyed Susan, showy goldenrod <i>Invasive species:</i> Kentucky blue grass

Miller Right-of-Way A and Savanna

Twenty-five populations of wild lupine observed.

Nectar species on site: spreading dogbane, dogbane, sand cress, butterfly weed, whorled milkweed, New Jersey tea, sand coreopsis, tall coreopsis, flowering spurge, rough blazing star, hairy puccoon, sweet clover, horse mint, common cinquefoil, blackberry/dewberry/raspberry, black-eyed Susan, showy goldenrod

Invasive species on site: quack grass, tree-of-heaven, Japanese chess, downy brome, oriental bittersweet, Canada thistle, Morrow's honeysuckle, Tartarian honeysuckle, wild four o'clock, Canada blue grass, Kentucky blue grass, glossy buckthorn, black locust, bouncing bet

Population	Wild Lupine Notes
1	Large population, dense throughout. Most have fruited, some vegetative. Dwarf honeysuckle and winged sumac shading out wild lupine at north end. <i>Nectar species:</i> sand cress, butterfly weed, New Jersey tea, sand coreopsis, flowering spurge, hairy puccoon, horse mint, showy goldenrod <i>Invasive species:</i> Morrow's honeysuckle, Canada blue grass
2	Somewhat dense at north end, sparse patches throughout rest of population. All vegetative. <i>Nectar species:</i> New Jersey tea, tall coreopsis, blackberry/dewberry/raspberry, black-eyed Susan <i>Invasive species:</i> oriental bittersweet
3	Dense around perimeter of population, none in middle where 20-foot tall black oak are present. Some has fruited, most vegetative. Black oak and riverbank grape are limiting population. <i>Nectar species:</i> blackberry/dewberry/raspberry <i>Invasive species:</i> wild four o'clock
4	Dense throughout the population. Most have fruited, some vegetative. <i>Nectar species:</i> spreading dogbane, flowering spurge, blackberry/dewberry/raspberry <i>Invasive species:</i> Kentucky blue grass
5	A few small clumps in the population. All vegetative. <i>Nectar species:</i> New Jersey tea, flowering spurge, showy goldenrod, black-eyed Susan <i>Invasive species:</i> Morrow's honeysuckle nearby
6	Several large dense clumps, a few small clumps and sparse patches scattered within the population. Some have fruited, some vegetative. Morrow's honeysuckle and lots of bracken fern may be shading out lupine. <i>Nectar species:</i> sand cress, butterfly weed, New Jersey tea, sand coreopsis, tall coreopsis, flowering spurge, blackberry/dewberry/raspberry, black-eyed Susan, showy goldenrod <i>Invasive species:</i> Morrow's honeysuckle, Kentucky blue grass, black locust
7	Small, dense population. All vegetative. <i>Nectar species:</i> None <i>Invasive species:</i> Kentucky blue grass
8	Somewhat dense in spots, more dense to west side. Could be shaded out by 20-foot tall black oaks and sassafras. <i>Nectar species:</i> spreading dogbane, sand cress, butterfly weed, sand coreopsis, tall coreopsis, flowering spurge, horse mint <i>Invasive species:</i> Morrow's honeysuckle, glossy buckthorn

Miller Right-of-Way A and Savanna (Continued)

9	<p>Some dense clumps at south end, sparse in area shaded by Morrow's honeysuckle and 20-foot tall black oak. Some has fruited, most vegetative. <i>Nectar species:</i> None <i>Invasive species:</i> quack grass, Morrow's honeysuckle, Kentucky blue grass</p>
10	<p>Quite dense at south and west ends, less dense to north; extends across right-of-way. Some fruiting, mostly vegetative. <i>Nectar species:</i> butterfly weed, whorled milkweed, sand coreopsis, flowering spurge, hairy puccoon, horse mint, black-eyed Susan <i>Invasive species:</i> Morrow's honeysuckle, Kentucky blue grass</p>
11	<p>Several scattered, somewhat dense clumps, a few smaller patches. One flowering, the rest vegetative. <i>Nectar species:</i> flowering spurge <i>Invasive species:</i> Morrow's honeysuckle, Kentucky blue grass</p>
12	<p>Several small scattered clumps. All vegetative. <i>Nectar species:</i> sand cress, flowering spurge <i>Invasive species:</i> Morrow's honeysuckle, Canada blue grass, Kentucky blue grass</p>
13	<p>Scattered patches throughout the population. All vegetative. <i>Nectar species:</i> spreading dogbane, butterfly weed, whorled milkweed, sand coreopsis, flowering spurge, rough blazing star, hairy puccoon <i>Invasive species:</i> Morrow's honeysuckle, Kentucky blue grass</p>
14	<p>Separated plants and scattered clumps in the population. All vegetative. <i>Nectar species:</i> flowering spurge, showy goldenrod <i>Invasive species:</i> Tartarian honeysuckle, Canada blue grass, Kentucky blue grass</p>
15	<p>Several small scattered clumps. All vegetative. <i>Nectar species:</i> hairy puccoon, flowering spurge <i>Invasive species:</i> Morrow's honeysuckle, Kentucky blue grass</p>
16	<p>Small, scattered, very sparse population. All vegetative. <i>Nectar species:</i> flowering spurge, hairy puccoon, showy goldenrod <i>Invasive species:</i> Morrow's honeysuckle, Kentucky blue grass</p>
17	<p>One small young plant. Vegetative. <i>Nectar species:</i> None <i>Invasive species:</i> None</p>
18	<p>One small young plant. Vegetative. <i>Nectar species:</i> None <i>Invasive species:</i> None</p>
19	<p>One large plant. Vegetative. <i>Nectar species:</i> None <i>Invasive species:</i> Morrow's honeysuckle</p>
20	<p>One small young plant. Vegetative. <i>Nectar species:</i> None <i>Invasive species:</i> None</p>
21	<p>A few large patches toward south end, large patch at northeast end, small clumps and scattered individuals throughout. None flowering, some fruiting, most vegetative. <i>Nectar species:</i> sand cress, butterfly weed, sand coreopsis, flowering spurge, hairy puccoon, horse mint, sweet clover, blackberry/dewberry/raspberry, showy goldenrod <i>Invasive species:</i> Morrow's honeysuckle, Kentucky blue grass</p>

Miller Right-of-Way A and Savanna (Continued)

22	Several small scattered clumps and individuals. All vegetative. <i>Nectar species:</i> None <i>Invasive species:</i> Morrow's honeysuckle, Kentucky blue grass
23	Several small clumps. All vegetative. <i>Nectar species:</i> flowering spurge <i>Invasive species:</i> Kentucky blue grass
24	Scattered, sparse, small individuals in population. All vegetative. <i>Nectar species:</i> sand cress, butterfly weed, sand coreopsis, flowering spurge, horse mint, common cinquefoil, black-eyed Susan <i>Invasive species:</i> Morrow's honeysuckle, Kentucky blue grass
25	Several plants within dense clump. One fruiting, the rest vegetative. <i>Nectar species:</i> None <i>Invasive species:</i> None

Miller Right-of-Way B

Seven populations of wild lupine observed.

Nectar species on site: sand cress, butterfly weed, New Jersey tea, sand coreopsis, tall coreopsis, flowering spurge, rough blazing star, hairy puccoon, horse mint, blackberry/dewberry/raspberry, black-eyed Susan, showy goldenrod

Invasive species on site: Hungarian brome, musk thistle, Morrow's honeysuckle, Tartarian honeysuckle, Canada blue grass, Kentucky blue grass

Population	Wild Lupine Notes
1	Three plants in clump. All vegetative. <i>Nectar species:</i> butterfly weed <i>Invasive species:</i> None
2	Somewhat dense, more dense at north end. All vegetative. Some oaks but not too dense, may eventually shade out lupine. <i>Nectar species:</i> butterfly weed, sand coreopsis, flowering spurge, hairy puccoon <i>Invasive species:</i> Morrow's honeysuckle, Canada blue grass, Kentucky blue grass
3	Scattered clumps within population. All vegetative. Black oak tops have died; resprouting and shrubby, shading out lupine. <i>Nectar species:</i> sand cress, New Jersey tea, tall coreopsis, flowering spurge, rough blazing star <i>Invasive species:</i> Morrow's honeysuckle, Kentucky blue grass
4	Scattered patches, more dense near middle in open areas. All vegetative. Black oak sprouts shading out lupine. <i>Nectar species:</i> sand cress, butterfly weed, New Jersey tea, sand coreopsis, tall coreopsis, flowering spurge, rough blazing star, hairy puccoon, horse mint, showy goldenrod <i>Invasive species:</i> Tartarian honeysuckle

Miller Right-of-Way B (Continued)

5	Patchy, most dense under sassafras. All vegetative. Dwarf honeysuckle, winged sumac, and sassafras, are dense and may choke out wild lupine. <i>Nectar species:</i> flowering spurge, horse mint, blackberry/dewberry/raspberry, black-eyed Susan, <i>Invasive species:</i> None
6	Several small clumps within population. All vegetative. Black oak, winged sumac, and sassafras shading out lupine. <i>Nectar species:</i> sand cress, flowering spurge, rough blazing star, hairy puccoon <i>Invasive species:</i> Kentucky blue grass
7	Several small clumps, more dense on east side. All vegetative. Willow, black oak and sassafras shading out lupine. <i>Nectar species:</i> tall coreopsis, flowering spurge, black-eyed Susan <i>Invasive species:</i> None

Miller Right-of-Way C

Three populations of wild lupine observed.

Nectar species on site: butterfly weed, New Jersey tea, sand coreopsis, flowering spurge, hairy puccoon, white sweet clover, horse mint, black-eyed Susan

Invasive species on site: Morrow's honeysuckle, Canada blue grass

Population	Wild Lupine Notes
1	Along fence at north end. Somewhat dense, mostly to west side of population. All vegetative. <i>Nectar species:</i> flowering spurge, hairy puccoon, horse mint <i>Invasive species:</i> Canada blue grass
2	Fairly dense, more dense at north side of population. All vegetative. <i>Nectar species:</i> hairy puccoon, horse mint <i>Invasive species:</i> Canada blue grass
3	Dense to south and north, somewhat sparse in center. Many fruited, most vegetative. <i>Nectar species:</i> butterfly weed, sand coreopsis, flowering spurge, hairy puccoon, horse mint, black-eyed Susan <i>Invasive species:</i> Morrow's honeysuckle, Canada blue grass

Stagecoach Road Right-of-Way A

Seven populations of wild lupine observed.

Nectar species on site: sand cress, butterfly weed, tall coreopsis, flowering spurge, rough blazing star, marsh blazing star, hairy puccoon, sweet clover, horse mint, blackberry/dewberry/raspberry, black-eyed Susan, showy goldenrod

Invasive species on site: quack grass, garlic mustard, Hungarian brome, Japanese chess, downy brome, ground ivy, sweet clover, Kentucky blue grass, Canada blue grass, bouncing bet

Population	Wild Lupine Notes
1	One small clump. Vegetative. Karner blue butterfly "window paning" on leaves. Population is being overgrown with non-native grasses. <i>Nectar species:</i> None <i>Invasive species:</i> quack grass, Hungarian brome, Kentucky blue grass
2	Fairly dense, especially in area shaded by black gum, black oak. All vegetative. <i>Nectar species:</i> sand cress, tall coreopsis, flowering spurge, hairy puccoon, sweet clover <i>Invasive species:</i> Kentucky blue grass
3	Dense throughout west and south ends, sparse and scattered to east. Few flowering, few fruiting, most vegetative. <i>Nectar species:</i> sand cress, rough blazing star, hairy puccoon, horse mint, blackberry/dewberry/raspberry <i>Invasive species:</i> downy brome, Kentucky blue grass
4	Fairly dense with large clumps at north end, scattered and few at south end. Few fruiting, most vegetative. <i>Nectar species:</i> flowering spurge, hairy puccoon, horse mint <i>Invasive species:</i> Kentucky blue grass
5	Dense at west end, scattered at east end. All vegetative. <i>Nectar species:</i> blackberry/dewberry/raspberry <i>Invasive species:</i> None
6	One large dense clump. Plants have fruited. <i>Nectar species:</i> None <i>Invasive species:</i> None
7	Most dense at west end, fairly dense throughout. Some have fruited, most vegetative. <i>Nectar species:</i> hairy puccoon, blackberry/dewberry/raspberry, showy goldenrod <i>Invasive species:</i> Canada blue grass, Kentucky blue grass

Stagecoach Road Right-of-Way B

Four populations of wild lupine observed.

Nectar species on site: flowering spurge, hairy puccoon, sweet clover, horse mint, blackberry/dewberry/raspberry

Invasive species on site: Hungarian brome, Japanese chess, downy brome, oriental bittersweet, bouncing bet, white stonecrop

Population	Wild Lupine Notes
1	Scattered clumps within population, most dense at north side and in center of south side. Some has fruited, most vegetative. <i>Nectar species:</i> blackberry/dewberry/raspberry <i>Invasive species:</i> None
2	One plant, fruiting. <i>Nectar species:</i> None <i>Invasive species:</i> None
3	2 small plants, vegetative. <i>Nectar species:</i> None <i>Invasive species:</i> None
4	Sparse along south and west boundaries, dense clumps throughout rest of population. A few have fruited, most vegetative. <i>Nectar species:</i> horse mint, blackberry/dewberry/raspberry <i>Invasive species:</i> Hungarian brome, Japanese chess, downy brome

Stagecoach Road Right-of-Way C

Three populations of wild lupine observed.

Nectar species on site: sand cress, butterfly weed, sand coreopsis, flowering spurge, hairy puccoon, horse mint, common cinquefoil, blackberry/dewberry/raspberry

Invasive species on site: quack grass, Hungarian brome, Japanese chess, downy brome, orange day lily, Tartarian honeysuckle, sweet clover, Kentucky blue grass, black locust

Population	Wild Lupine Notes
1	Dense at north end, sparse and scattered at south end of population. One flowering, none fruiting, mostly vegetative. <i>Nectar species:</i> sand cress, flowering spurge, hairy puccoon, horse mint <i>Invasive species:</i> downy brome, Kentucky blue grass, both fairly dense
2	Sparse throughout most of population, fairly dense at north end of population. None flowering, few fruiting, mostly vegetative. <i>Nectar species:</i> butterfly weed, sand coreopsis, flowering spurge, hairy puccoon, blackberry/dewberry/raspberry <i>Invasive species:</i> downy brome, Kentucky blue grass
3	One clump. All vegetative. <i>Nectar species:</i> None <i>Invasive species:</i> Japanese chess, downy brome